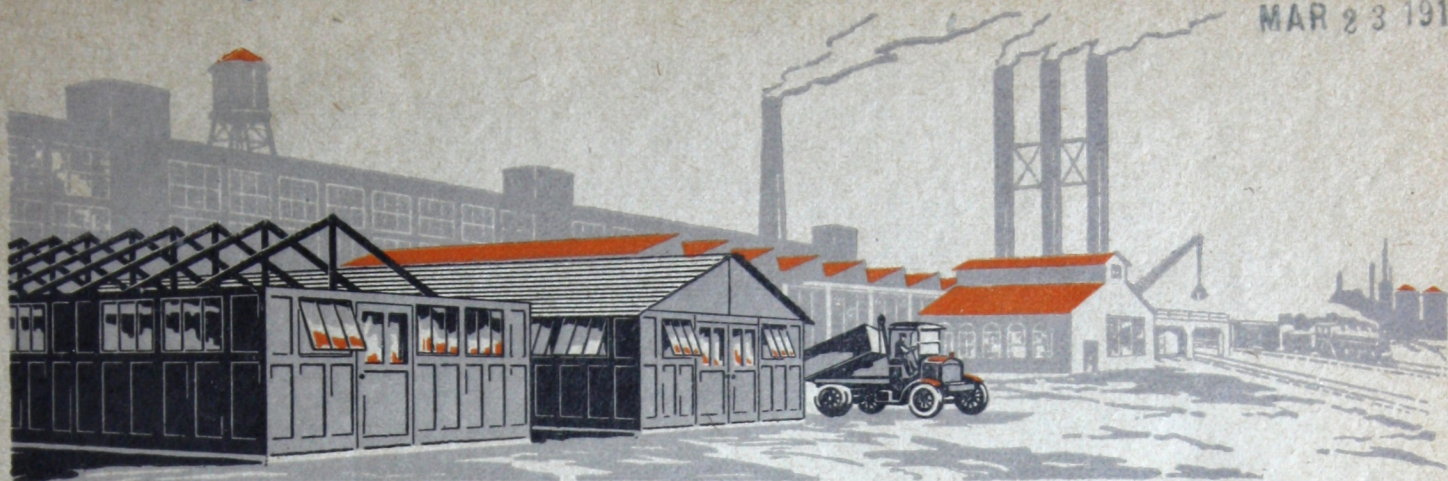


535-4.

MAR 23 1918



The Building You Want



STANDARDIZED
STRUCTURES



FRANKLIN
INSTITUTE
LIBRARY

steel building construction

is in Our Warehouse



LIBRARY
INSTITUTE
FRANKLIN

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CCA

Standardized Structures

Built with

Standard Stock Units



TRUSCON STEEL CO.

Copyright, 1917

TRUSSED CONCRETE STEEL COMPANY
YOUNGSTOWN, OHIO

ATLANTA, GA., 800 Forsyth Bldg.
BALTIMORE, MD., Munsey Building.
BOSTON, MASS., 146 Summer St.
BUFFALO, N. Y., 644 Prudential Bldg.
CHICAGO, ILL., 1506 Garland Bldg.
CINCINNATI, OHIO, Provident Bank Building.
CLEVELAND, OHIO, 1118 Citizens Bldg.
COLUMBUS, OHIO, Col. Savings & Trust Bldg.
DALLAS, TEXAS, 738 Wilson Bldg.
DAYTON, OHIO, Mutual Home Building.
DENVER, COLORADO, 510 Colorado Bldg.
DES MOINES, IOWA, 411 Hubbell Bldg.
DETROIT, MICH., 58-60 Lafayette W.
EL PASO, TEX., Neff-Stiles, Bldg.
INDIANAPOLIS, IND., Fletcher Sav. & Trust Bldg.
KANSAS CITY, MO., 611 Bryant Bldg.
LOS ANGELES, CAL., 1520 Bay St.
LOUISVILLE, KY., 628 Paul Jones Bldg.

MILWAUKEE, WIS., M. & M. Bank Bldg.
MINNEAPOLIS, MINN., Metropolitan Bank Bldg.
NEW YORK, N. Y., 110 W. 40th St.
NORFOLK, VA., 416 Dickson Bldg.
OKLAHOMA CITY, OKLA., 721 Insurance Bldg.
OMAHA, NEBR., 1111 W. O. W. Bldg.
PHILADELPHIA, PA., 810 Commonwealth Bldg.
PITTSBURGH, PA., 2541 Oliver Building.
PORTLAND, OREGON, 194 North 13th St.
ROSWELL, N. M., Citizens Bank Bldg.
ST. LOUIS, MO., Syndicate Trust Bldg.
ST. PAUL, MINN., 817 Commerce Building.
SALT LAKE CITY, UTAH, 423 McIntyre Building.
SAN ANTONIO, TEXAS, 338 Bedell Building.
SEATTLE, WASH., 488 Central Building.
SPOKANE, WASH., Old National Bank Bldg.
SYRACUSE, N. Y., 444 Gurney Bldg.
TOLEDO, OHIO, 518 Spitzer Bldg.
WASHINGTON, D. C., 314 Woodward Bldg.

147-02136 147



Clearing the Site



Two Weeks Later

THE RELIABLE ENGINE CO.

MANUFACTURERS OF
High-Grade Gas and Oil Engines

Portsmouth, Ohio, Oct. 18, 1917

The Trussed Concrete Steel Co.,

Gentlemen:

We wish to thank you for the splendid service given us in the delivery and erecting of the Truscon steel building which has just been erected.

You shipped within the time specified, had your erector on the job the date promised, building was erected within the time specified and is in every way satisfactory to us. We have evidenced same by giving your erector a check in full for the entire job and a clean bill.

The more we see of this building, the more we realize our mistake in not installing same when we figured with you one year ago instead of the frame building we erected and which has since been destroyed by fire, and which is replaced by the Truscon steel building.

Had we put up the steel building in the first place, instead of the frame, we would not have had a fire, but would have had a more efficient manufacturing building from the start which would have saved sufficient money in our daily operations to pay for itself in a few months.

Everyone who has inspected the building, speaks very highly of it and we are well pleased with it.

CH:C

Very truly yours,
CHRIS. HEER, President,
THE RELIABLE ENGINE CO.

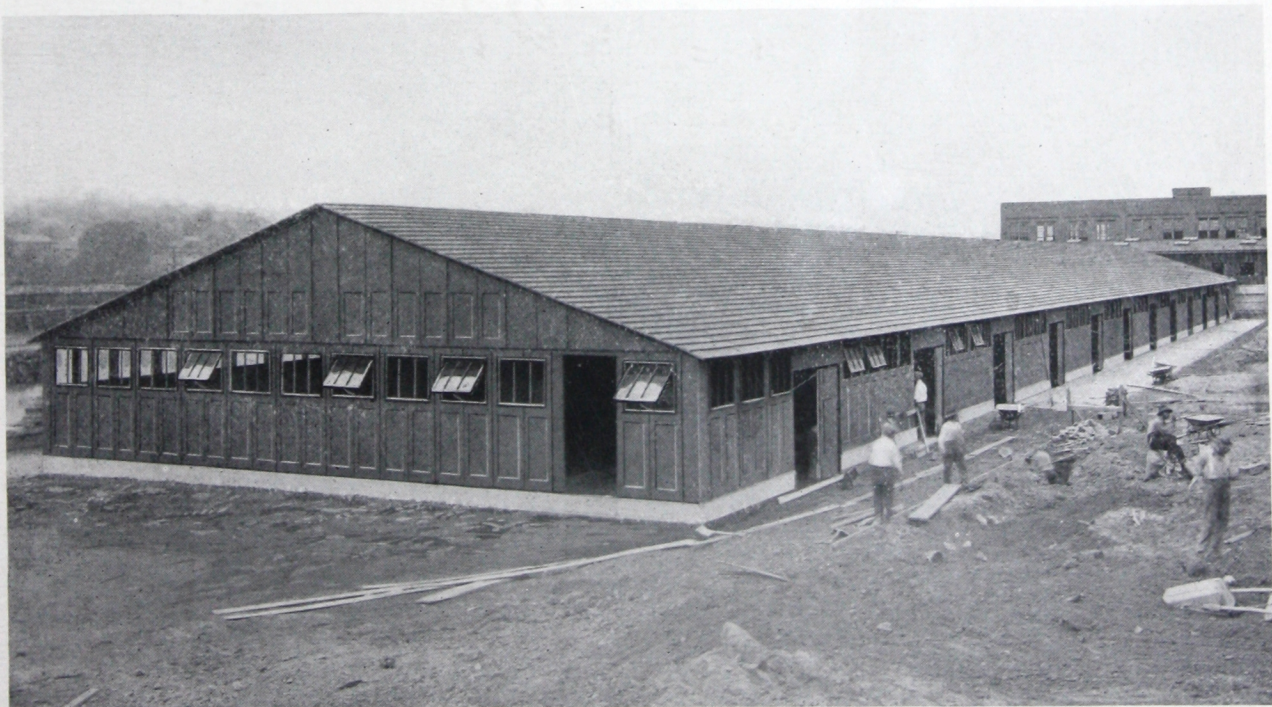
"Splendid service * * * In every way satisfactory"

Standardized Structures of Steel for Emergency Purposes

STANDARDIZATION is an economic necessity at all times. The nation's resources must be conserved; waste must be eliminated. There is NO WASTE when Truscon Steel Buildings are built with standard stock units.

The standardization of energy and of materials, produces maximum ECONOMY.

Economy is 100% CONSERVATION. Labor reaches its highest degree of efficiency when employed in the producing of standard parts and there is NO SCRAPPING of raw materials. Standard parts for all Truscon Steel Buildings are stored in our warehouse, ready for immediate shipment.



Truscon Steel Building used as Warehouse. Size, 50' x 298'

Fireproof and Permanent

The greatest enemy to big business is fire. Truscon Steel Buildings are manufactured from incombustible materials. The Jos. N. Smith Company of Detroit Mich., stored thousands of dollars worth of materials in a Truscon Steel Building. A large pile of lumber adjacent to this building ignited and the Truscon Steel Building absolutely protected its contents from the conflagration. This building paid for itself many times over, although its first cost was no greater than would have been the cost of a fire-inviting structure.

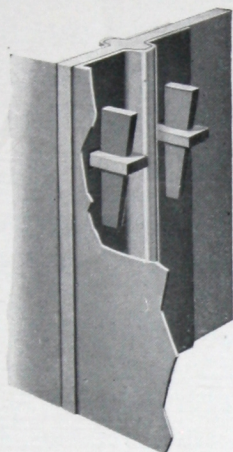
Total destruction by fire can be positively prevented. Fire is always a tool of the enemy bent upon clogging the wheels of industry. Eliminate this dangerous element by building steel structures.



Truscon Steel Building of Jos. N. Smith Co., Detroit, Mich., withstood fierce fire and protected the contents

Conserve Labor for Maximum Economy

All field connections used in the construction of a Truscon Building are made with this standard slotted bolt and wedge device. All connections are easily and quickly made and as readily dismantled. The Lakewood Engineering Company, of Cleveland, Ohio, has erected and dismantled a Truscon Steel Building four times during the last



Standard Slotted Bolt and
Wedge Connection.

year and their satisfaction has increased in proportion. They first erected a Truscon Steel Building for a warehouse. Sometime afterwards one of their manufacturing buildings was destroyed by fire. The Truscon Steel Building was taken down and set up over the machinery, which was again put in operation with but a delay of a few days. A new permanent building was constructed over the Truscon Building and when this was completed, the Truscon Building was taken down and re-erected. Later, necessity demanded a building at one of their out-of-town plants and the Truscon Building was shipped and erected again on its new site.

Truscon Steel Buildings are standardized to provide a flexibility of design. Study this photograph of a Truscon Steel warehouse, 50 ft. in width and 300 ft. in length. Standardized stock parts will build this building in any length in multiples of 4 ft.



50-ft. wide Truscon Steel Warehouse

It Fills Your Exact Needs

Truscon Steel Buildings can be used for innumerable purposes. An interior view of a building 40 ft. wide by 140 ft. long used as a dining room is shown below. The kitchen for this building is separated from the dining room by means of a steel fireproof partition, constructed of the same standard building parts as are used in the balance of the building. This building, throughout last winter's very severe weather conditions, was heated very economically and satisfactorily with stoves as shown in the photograph. An abundance of light and circulation of air is obtained by using standard stock sash panels placed 8 ft. on centers in the side walls of this building and each sash opening has 100% ventilation. Thus a free movement of air is obtained and ample air change is provided for.

Sanitary conditions are perfect. There are no cracks in the joints in which vermin can hide. Sanitary, economical and fireproof, this dining room meets all requirements without undue initial expense.

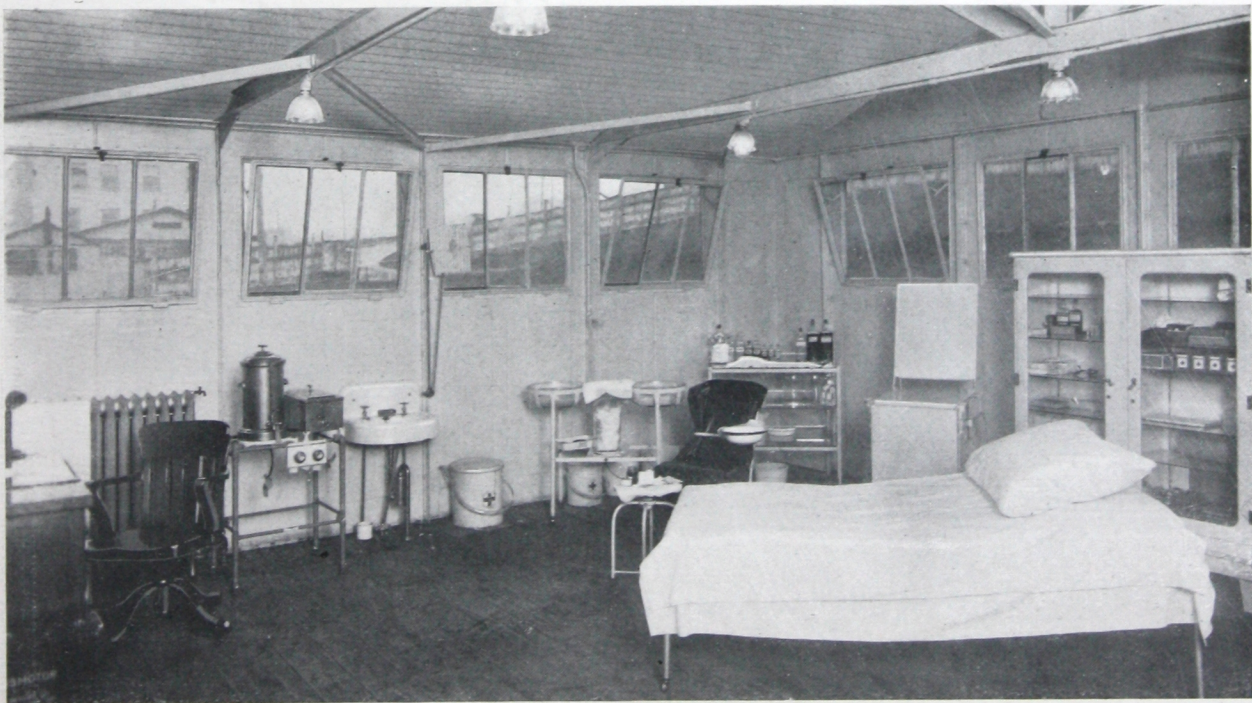


Truscon Steel Building used as Dining Hall at Industrial Plant

A Standard Building for a Special Purpose

The conservation of health and lives of our workmen is a duty. First aid to the workmen of a large manufacturing plant is given in a Truscon Steel Building illustrated on this page. A maximum amount of light and ventilation is obtained by placing steel sash panels at 4 ft. centers. This building has paid for itself many times over because it has conserved the health of the workmen and given them the attention which has sent them back to work with a minimum loss of service to their employer.

An emergency hospital is a necessity in every manufacturing plant. A Truscon Steel Building for this purpose is economical, sanitary and fireproof. Stock parts for a building of this kind are stored in our warehouse ready for shipment.



Interior of Truscon Steel Factory Hospital. Note inner lining under roof

Wide Range of Use

Numerous installations in all parts of the country show the wide adaptability of Truscon Steel Buildings for varied uses. Manufacturers are using them extensively at their plants for shop buildings, warehouses, dining halls, hospitals, filing rooms, time offices, etc. Other builders find them ideal for temporary schools, churches, garages, election booths, bunkhouses, etc. In fact, Truscon Steel Buildings are suitable for any use, where fireproofness and economy are desired with the added features of quick erection and portability.

When located on railroad sidings, the Truscon Steel Building can be readily erected on a platform constructed at the level of the freight car. The light weight of the building saves expense in foundations and supports.

Simplified Foundations

Comparatively light foundations may be used for Truscon Steel Buildings, because of their light weight. For temporary sites, a timber foundation is entirely feasible, while for more permanent locations concrete is used. In some cases the building is elevated above the ground by supporting it on posts with beams across the top.



One of the large Truscon Steel Warehouses erected by the Pierce Arrow Motor Car Co. at Buffalo, N. Y.

Any Size or Arrangement

Buildings of any length and of any of the widths listed below are constructed of standard stock units. These buildings placed in a factory yard are of great value and utility. Fireproof buildings built of standard Truscon stock units eliminate wooden shacks and shelters that are always a menace to the other buildings of the plant.

Truscon Steel Buildings can be taken down and re-erected, enlarged or reduced in size. Standard wall panels can be replaced with doors or windows, in fact any combination of glass area can be provided from standard sections. The standardization of tools, equipment and even labor has become a matter of course. Standardization of buildings is a logical development. Determine the width of building required from the list below and use any length desired in multiples of 4 ft. Window panels, solid panels and doors are interchangeable and as many of each as desired may be selected. Side walls either 7' 10" or 11' 6" in height are furnished.

Standard Widths of Building.....

..... 6', 8', 10', 12', 14', 18', 20', 24', 28', 40', 50', 60'

Standard Lengths of Building..... Any multiple of 4 feet

Heights of Wall Panels..... 7' 10" or 11' 6"

Other heights can be obtained by varying curb heights.

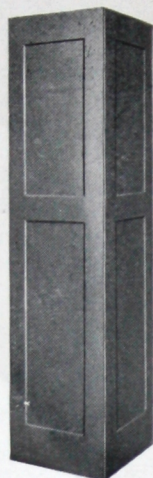
Choice of interchangeable panels, solid,— windows or doors (see pages 10 and 11)



Group of Truscon Steel Buildings used for Filing Rooms, Print Shop, Dining Halls, Shop Hospitals, etc.



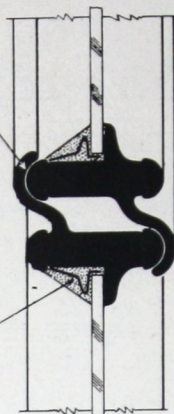
Solid Panel
4'0" x 7'10"



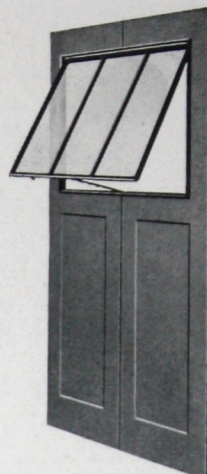
Corner Panel
2'0" x 2'0" x 7'10"

DOUBLE CIRCULAR
SURFACE CONTACT
OF WEATHERPROOF
VENTILATORS

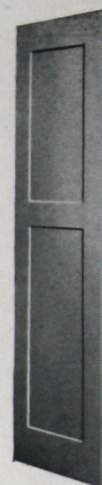
SIMPLE GLAZING
WITH SPECIAL
SPRING CLIPS
SMALL AMOUNT
OF PUTTY



Section Around Ventilator
One-half Size



Sash Panel
4'0" x 7'10"



Solid Panel for End
of Building 2'0" x 7'10"

The Standard Wall Panels for Truscon Steel Buildings

All wall panels are 4'0" in width and either 7'10" or 11'6" in height. The 7'10" panels are of two types—solid or with steel sash. The 11'6" panels are of four types—solid and with three arrangements of steel sash. Other units are 2'0" x 2'0" corner panels and 2'0" wide panels for ends of buildings.

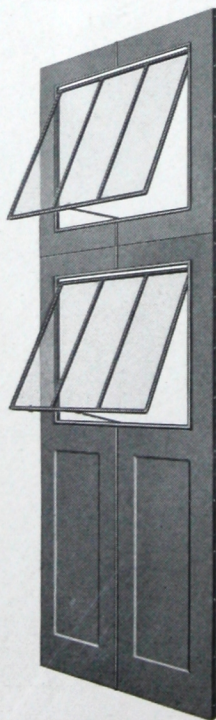
United Steel Sash, famed for its high quality, is used in sash panels. Note the double contact weathering and simple method of glazing. The ventilator frame is pivoted 3 inches from the top so that the sash when open allows air currents to pass over it and affords maximum protection from driving rain.



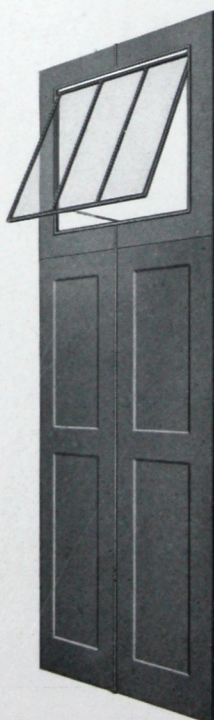
Solid Panel
4'0" x 11'6"



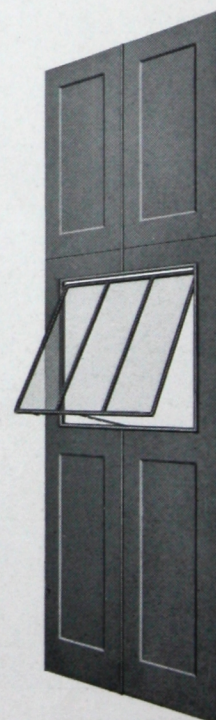
Corner Panel
2'0" x 2'0" x 11'6"



Double Sash Panel
4'0" x 11'6"



Upper Sash Panel
4'0" x 11'6"



Center Sash Panel
4'0" x 11'6"



Solid Panel for End of
Building, 2'0" x 11'6"



Steel Doors for Truscon Steel Buildings

Both single and double doors are made in such sizes as to fit in the standard wall panels 4' 0" or 8' 0" wide, and are interchangeable with them. All doors are furnished in heights as follows: for ordinary purposes, 7' 5½" high (with panel above to complete the panel height of 7' 10"), and also 7' 9½" high; also for special purposes 9' 9½" high. Doors are furnished either solid or with upper panels provided for glass. Doors are readily glazed after erection, but we do not supply the glass owing to danger of breakage in shipment.

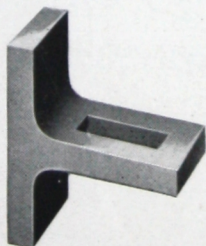
All doors are fitted with standard Yale locks, cylinder style; suitable handles and Stanley hinges. In addition, the double door has a top and bottom bolt operated by handle and cam movement.

Table of Widths and Heights

Single doors, 4' 0" wide—heights 7' 5" (with panel to complete height of 7' 10"), 7' 9½" and 9' 9½".
Double doors, 8' 0" wide—heights 7' 5" (with panel to complete height of 7' 10"), 7' 9½" and 9' 9½".



Steel mullion used between wall panels, 7' 10" high.



Tee bolt and wedge for the standard connection.

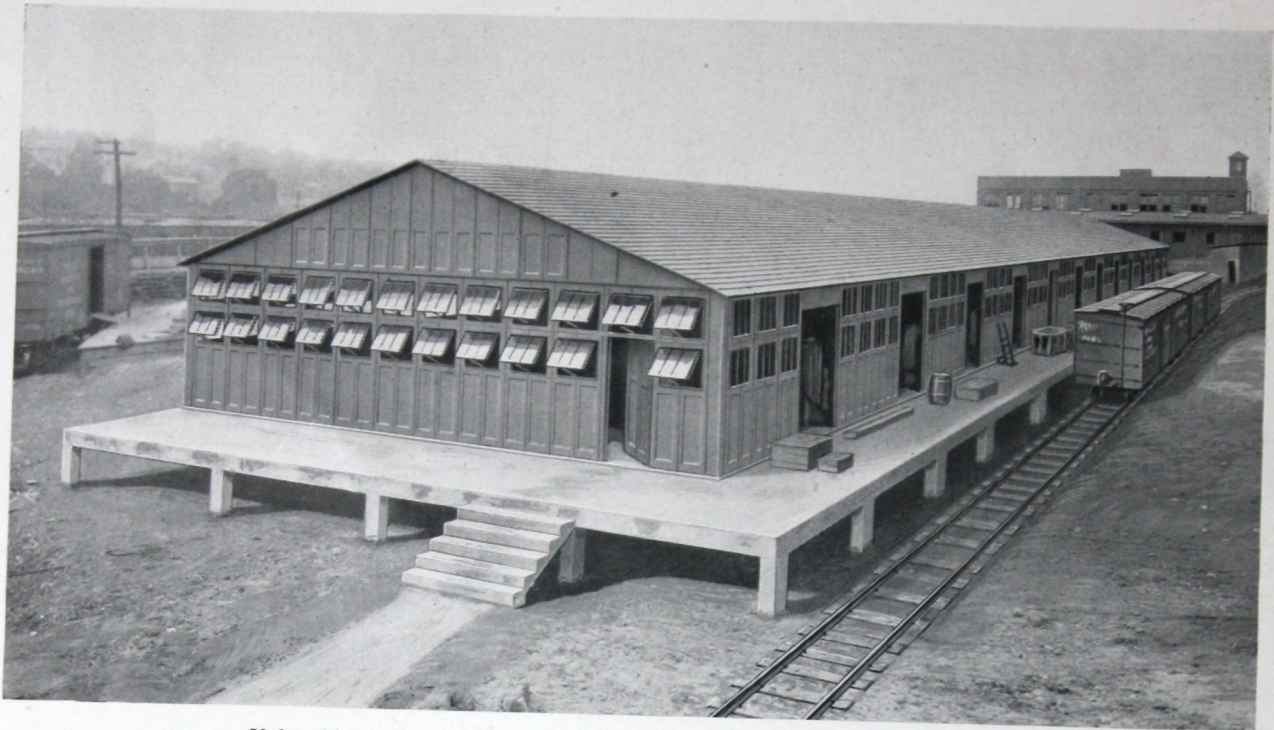


Section showing completed standard side wall connection.

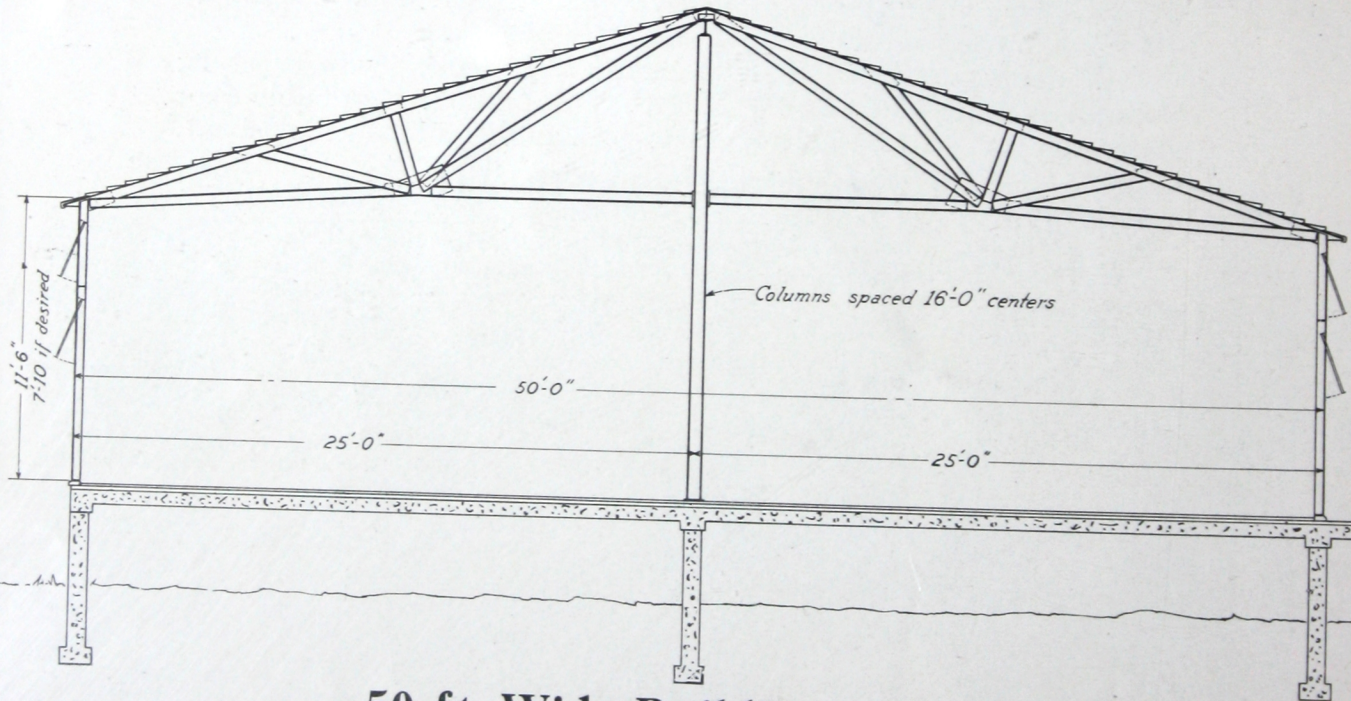


Steel mullion used between wall panels, 11' 6" high.

The Standard Connection and Mullions

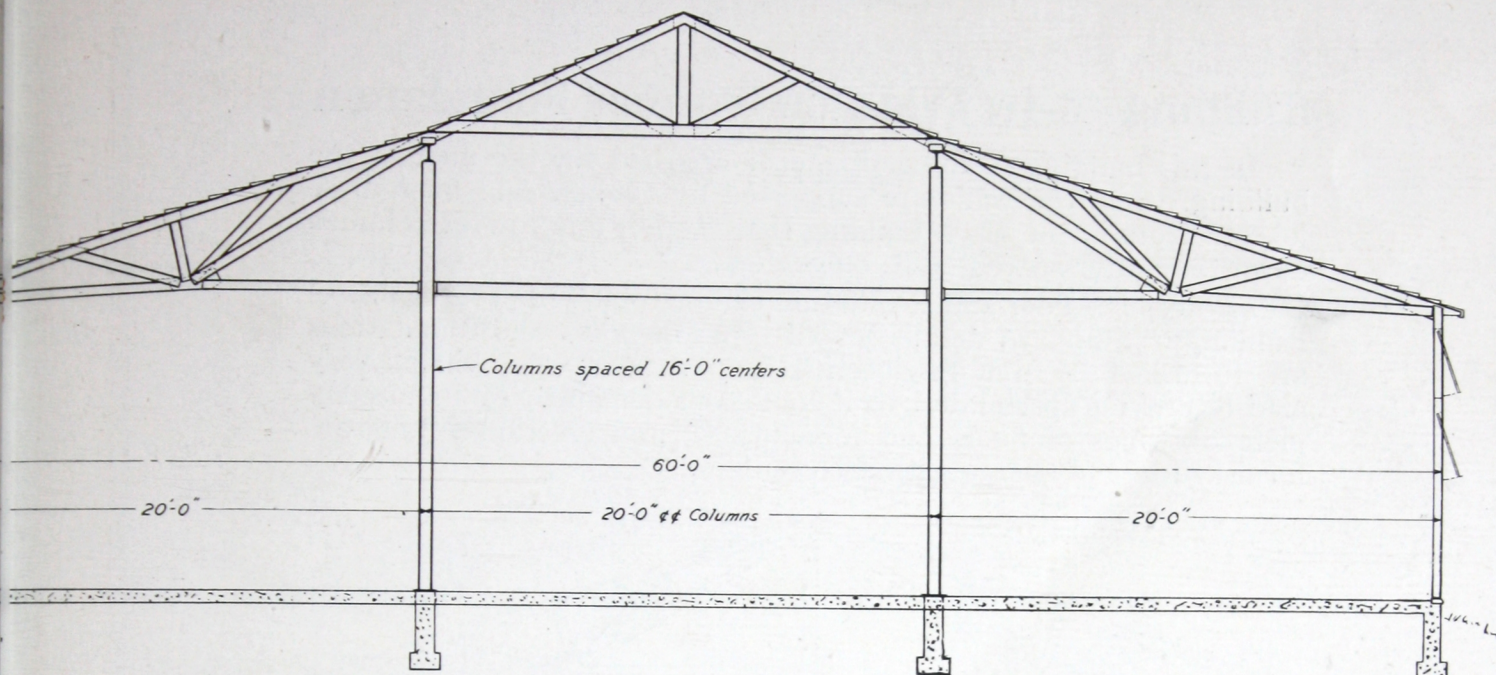


50-ft. wide Truscon Steel Warehouse on railroad siding, 11'6" high wall panels.



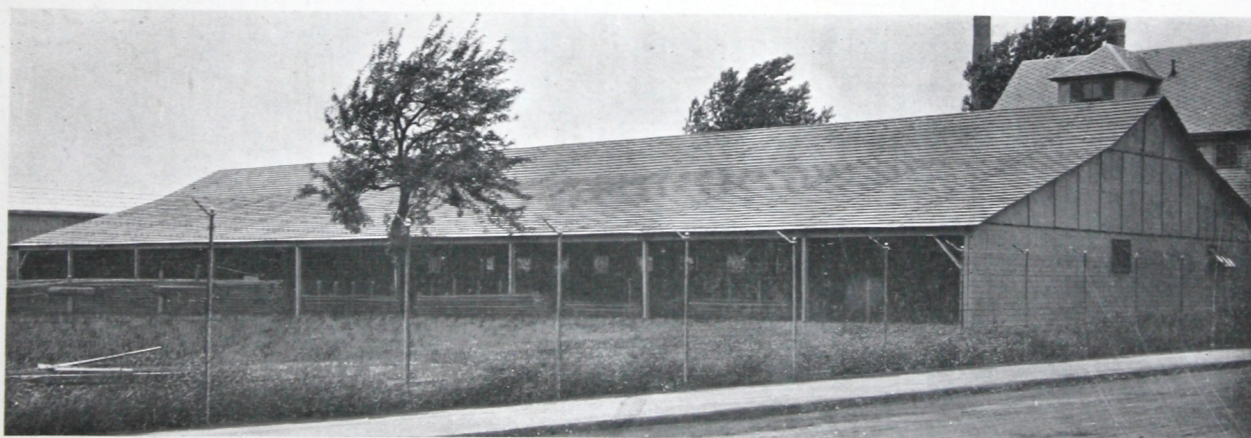
50-ft. Wide Building on Railroad Siding

In this building the floor and the shipping platform are at the level of the freight car door. The elevation above the ground is provided by a platform of reinforced concrete or timber construction. The Truscon Steel Building is erected on this platform. Because of its light weight, the construction is simple and extremely economical.



60-ft. Wide Building with Concrete Foundations

In this building there are two rows of columns across the width, the columns being spaced 16 ft centers along the length. All the necessary structural materials for the building above the floor line are furnished by us.



60-ft. wide Truscon Steel building, Bar Department, Boston Warehouse.
Open side of building can be enclosed with doors, sash panels or solid panels.

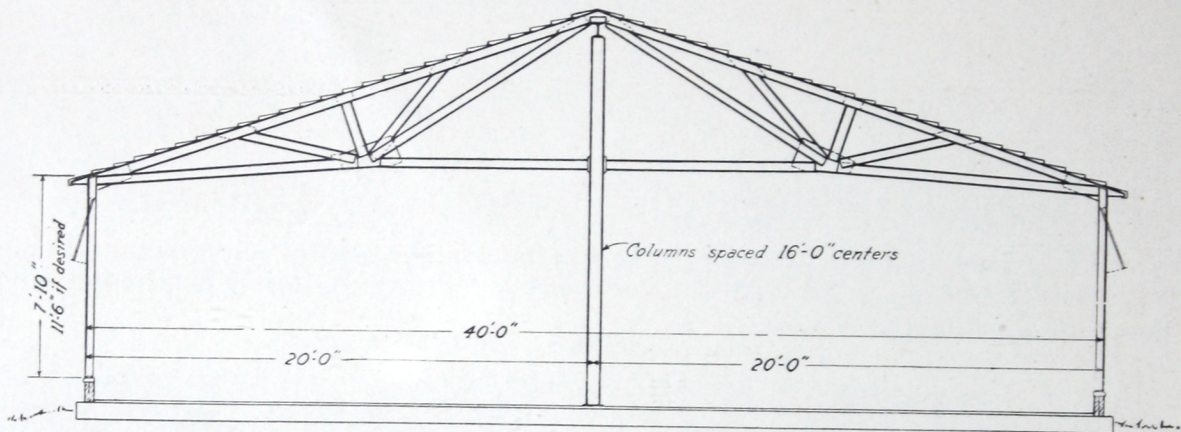


Four Truscon Steel Buildings at Boston Warehouse

Building 40-ft. Wide on Timber Foundation

In this building a timber foundation is laid for the floor of the building, while the walls are supported by timbers laid over these joists. Note in the 40-ft. building that there is one row of columns down the center spaced 16-ft. on centers.

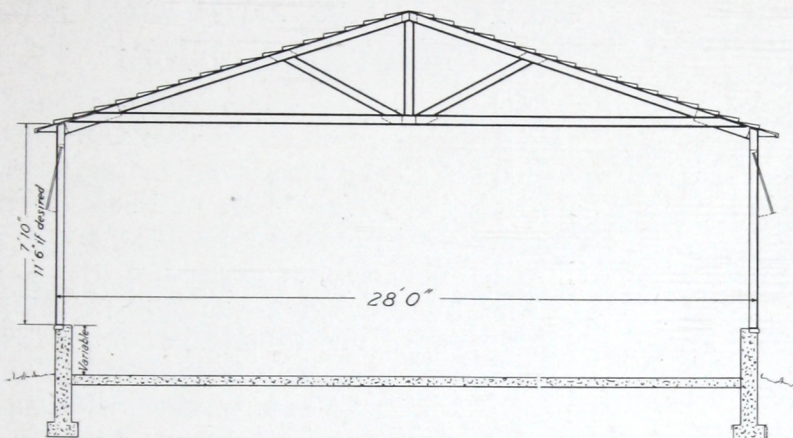
Any type of floor and foundation can be used with Truscon Steel Buildings. Standard details for all types of floors and foundations are furnished by our Engineering Department, who will be very glad to provide special designs if conditions demand. Full and complete drawings of floors and foundations, and erection details are furnished free of charge with each building.



Truscon Steel Warehouse for the Chesebrough Manufacturing Co., Perth Amboy, N. J.

A 28-ft. Wide Building on a Concrete Wall for Any Emergency

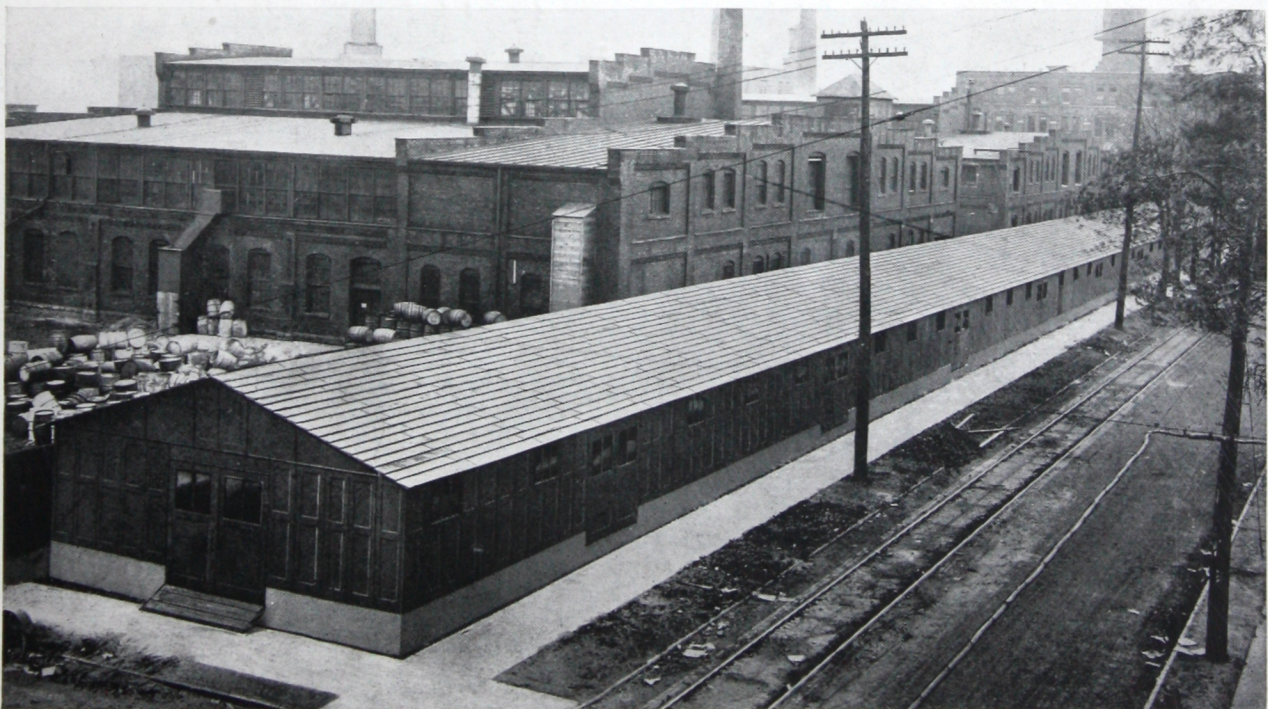
Ten days after the order was received for a building 28-ft. by 440-ft. from Parke, Davis & Company, of Detroit, foundation plans were prepared, the materials assembled and shipment completed. The foundation and floor were constructed while the materials were in transit. The erection of the building was completed fourteen days after the materials arrived on the ground. Standardization made this service possible.



What Parke, Davis & Co. Say:

"The Truscon Steel Building, which we recently purchased from you, seems to be entirely satisfactory, and we are very well pleased with the manner in which you handled this order.

"In so far as the erection of same is concerned, the work was carried on as rapidly as we expected, and we, of course, found the speed of construction much faster than any other type of building which we could secure."



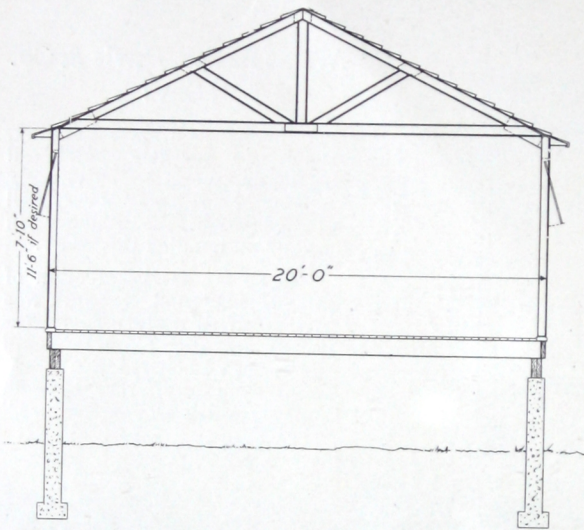
Truscon Steel Building 28' x 440' for Parke, Davis & Co., Detroit, Mich., leading manufacturers of pharmaceutical and biological products



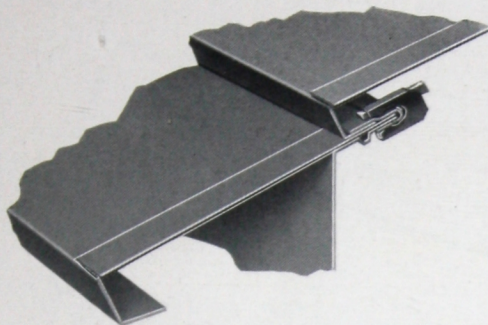
20-ft. Wide Building with Elevated Floor

Note in these buildings that the foundation consists of posts, across the top of which are placed wood timbers which support the walls and floor of the building. This construction may be of wood or reinforced concrete, as desired.

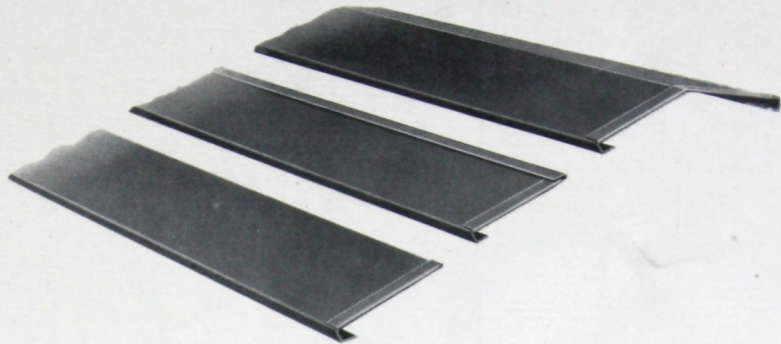
The buildings for the United States Government, here illustrated, are perfectly ventilated by the combination of top-pivoted side wall sash placed in the sides of the building and the rotary head ventilators in the ridge. Sash panels and ventilators may be arranged as desired.



United States Government uses Truscon Steel Buildings



Weathertight Joint at Eaves



Eave, Intermediate and Ridge Plates

Truscon Steel Roofing Plates

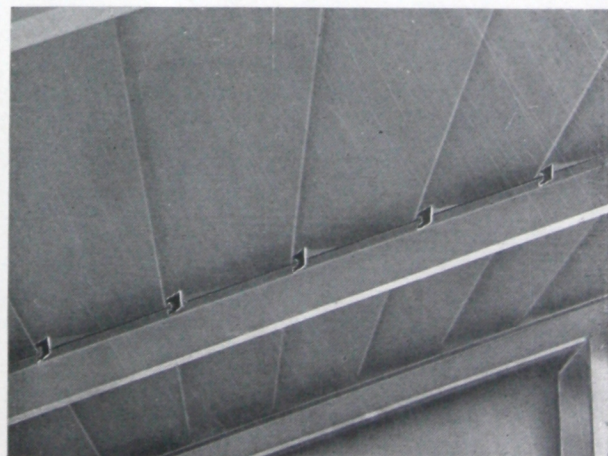
Trusses and roof plates for Truscon Steel Buildings are all steel. These plates are thoroughly interlocking in design and construction, so as to assure absolutely weather-tight connections.



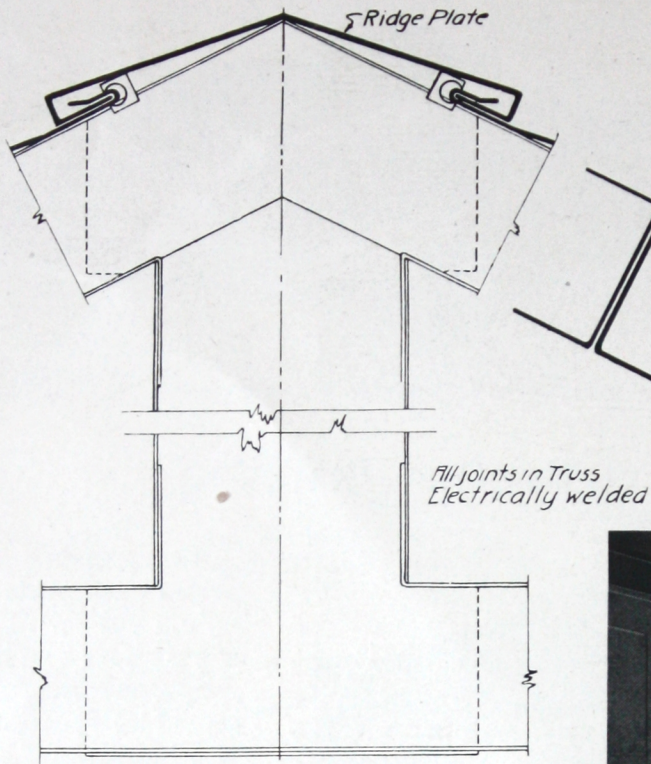
Applying Weathertight Strips over ends of Roof Plates

The ends of plates are interlocked with weather tight strips, as indicated in illustration. Roof plates are securely fastened to trusses underneath by means of a special clip which is readily applied.

These details are worthy of study and are convincing proof that Truscon Steel Buildings are positively weatherproof and at the same time easy to erect, take apart and re-assemble.



Fastening Roof Plates to Steel Trusses with Special Clips



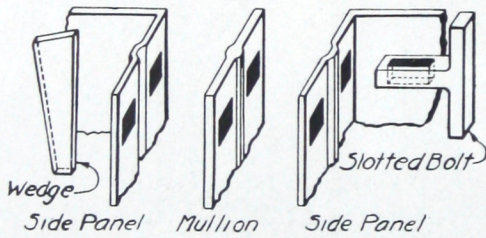
DETAIL AT RIDGE

1" of Joint Strip to be bent over as shown

METHOD OF PLACING
RIDGE JOINT STRIPS



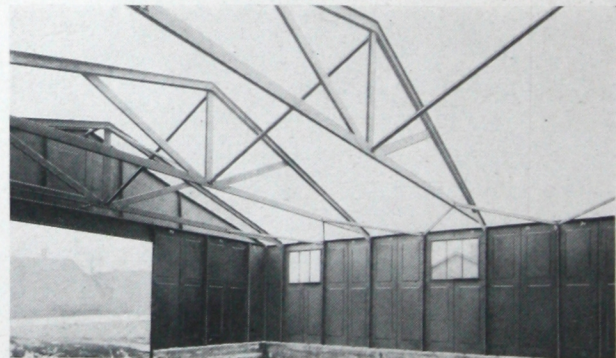
Sway Bracing



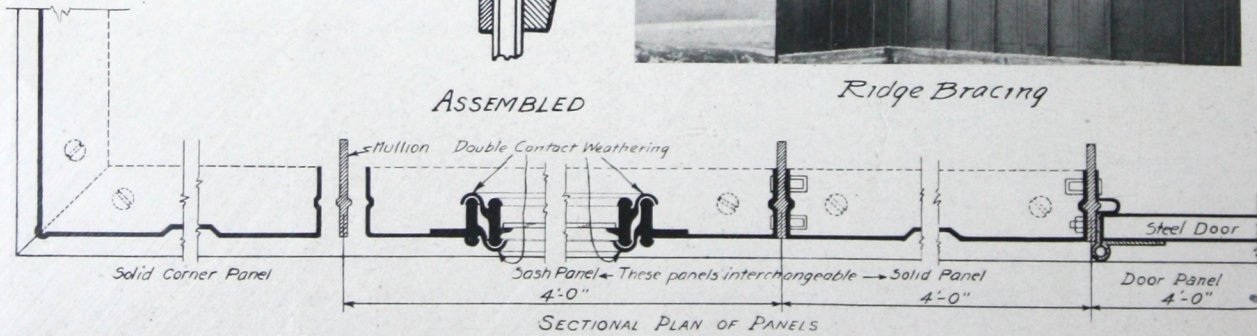
READY TO ASSEMBLE



ASSEMBLED

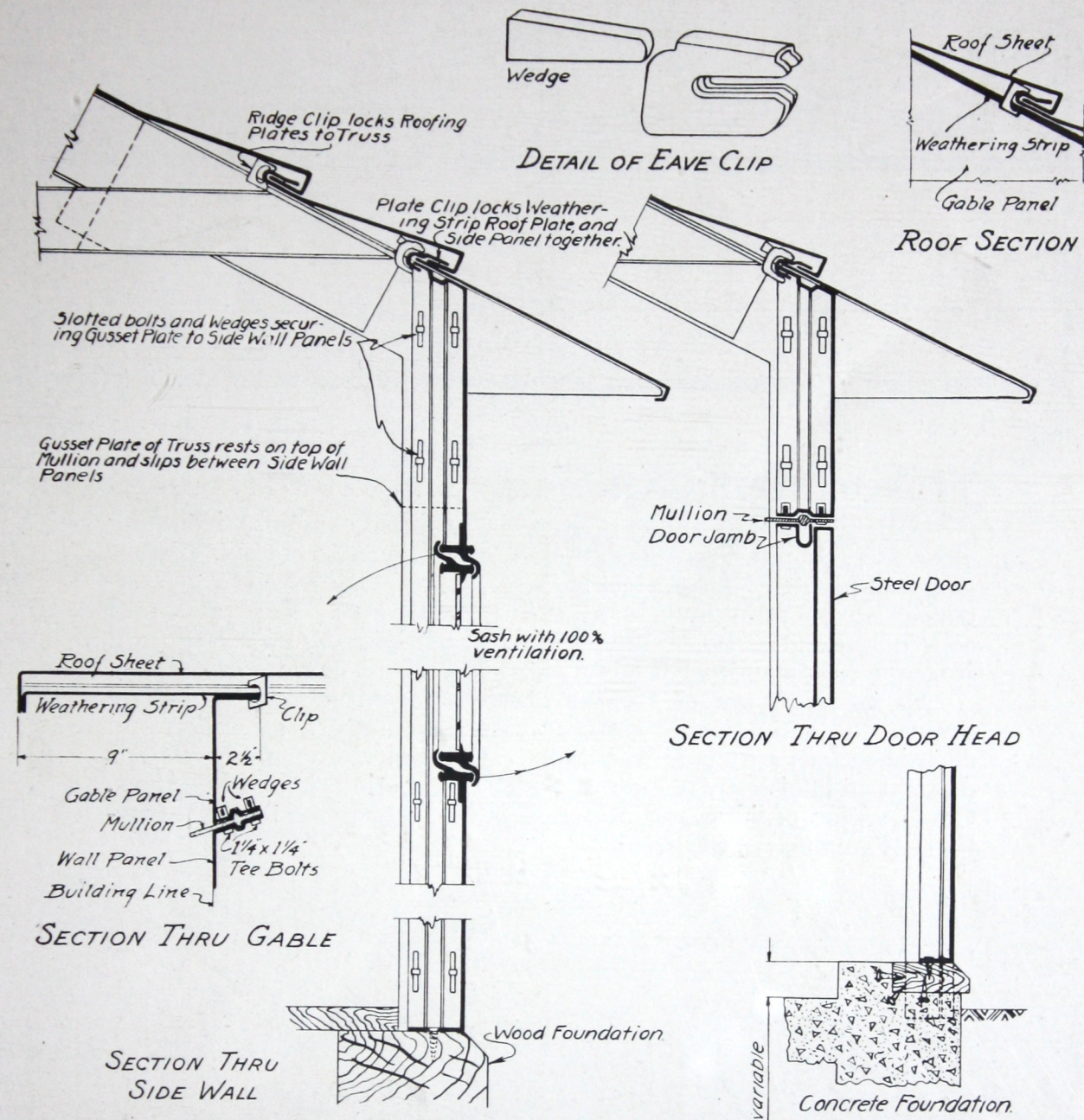


Ridge Bracing



ERECTION DETAILS OF TRUSCON STEEL BUILDINGS

Trussed Concrete Steel Co.

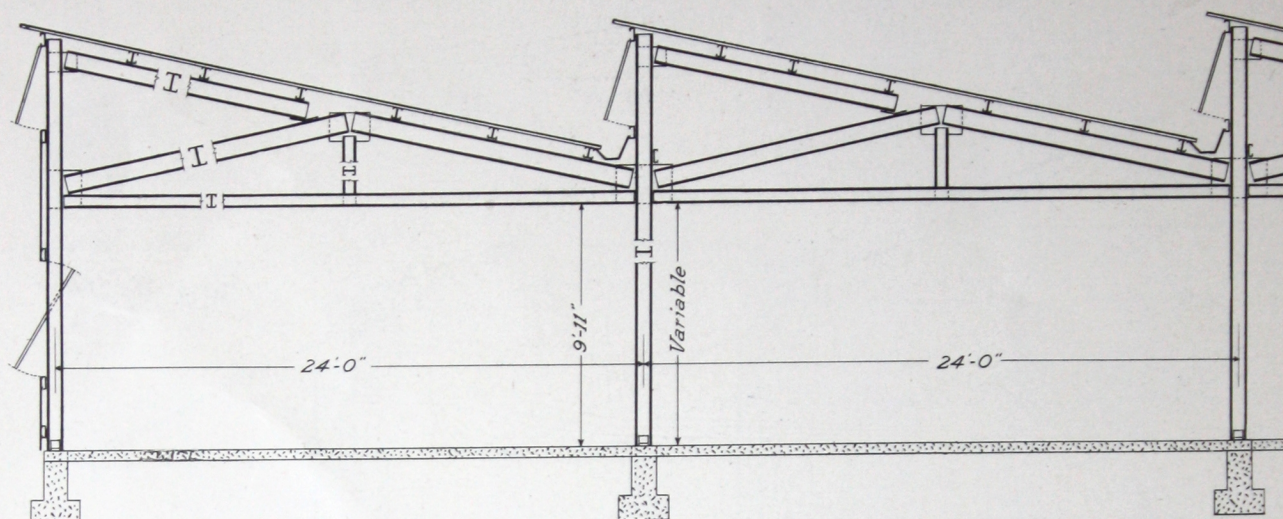


Erecting Steel Building



Interior of Completed Building

ERECTION DETAILS OF TRUSCON STEEL BUILDINGS



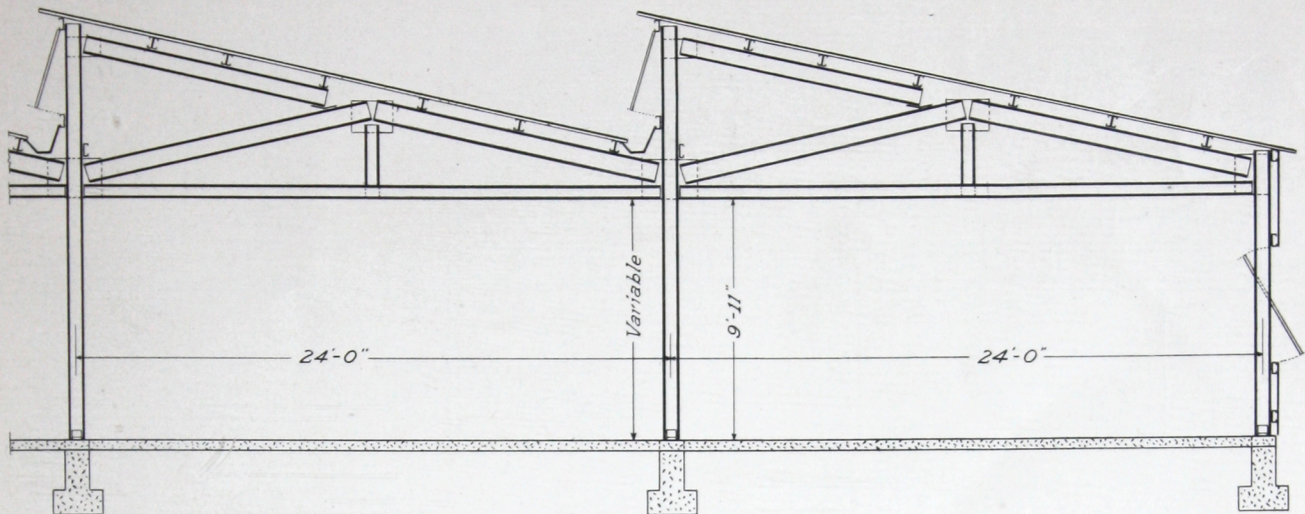
Truscon Buildings with Saw Tooth Roofs

In these buildings the steel frame is furnished complete, including all trusses, columns, purlins and girts, and also all steel sash. Either standard pivoted United Steel Sash or Truscon Continuous Sash controlled by operator may be used in the sawtooth. Roof and wall construction may be of any material: Hy-Rib Metal Lath and stucco, asbestos protected metal, corrugated iron, or wood sheathing.

All members are of the unit type of construction. They are shipped "knocked-down" and are easily assembled for erection and all connections are made with bolts. Mechanical appliances such as derricks and hoists are not necessary for the erection of these buildings. Conservation of labor and materials is the keynote of this construction. Economy is the result.



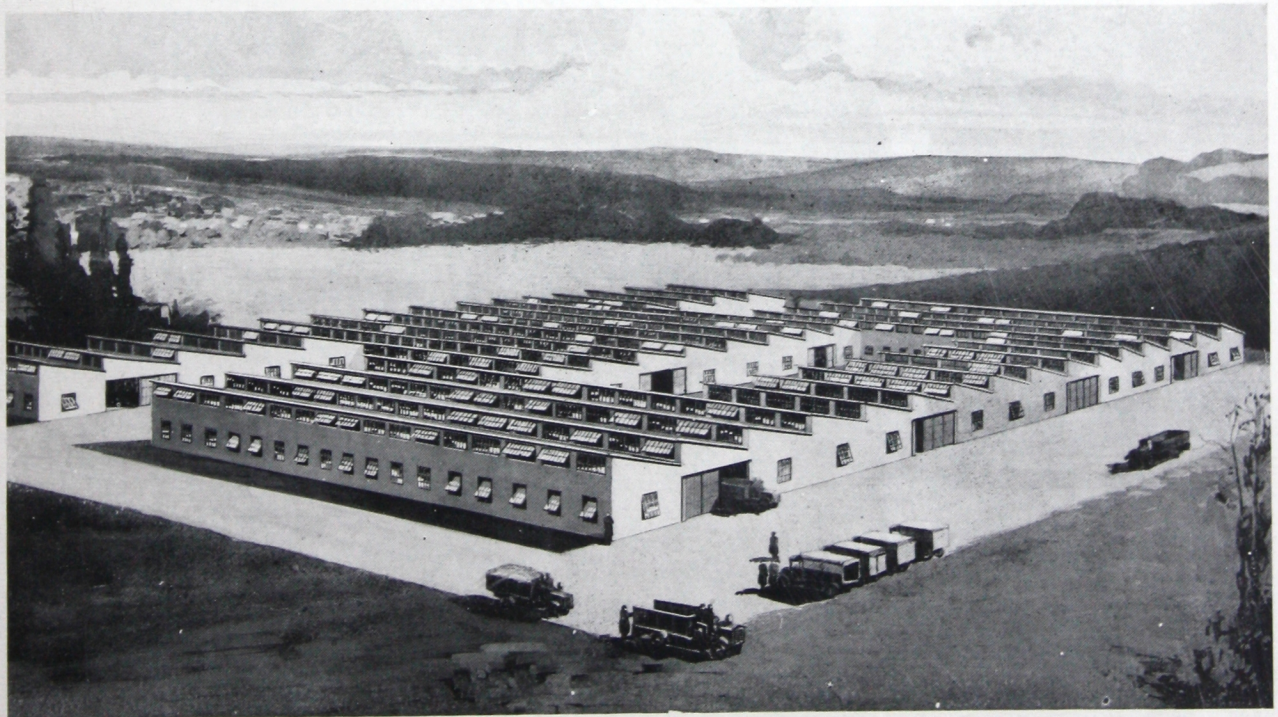
Trussed Concrete Steel Co.

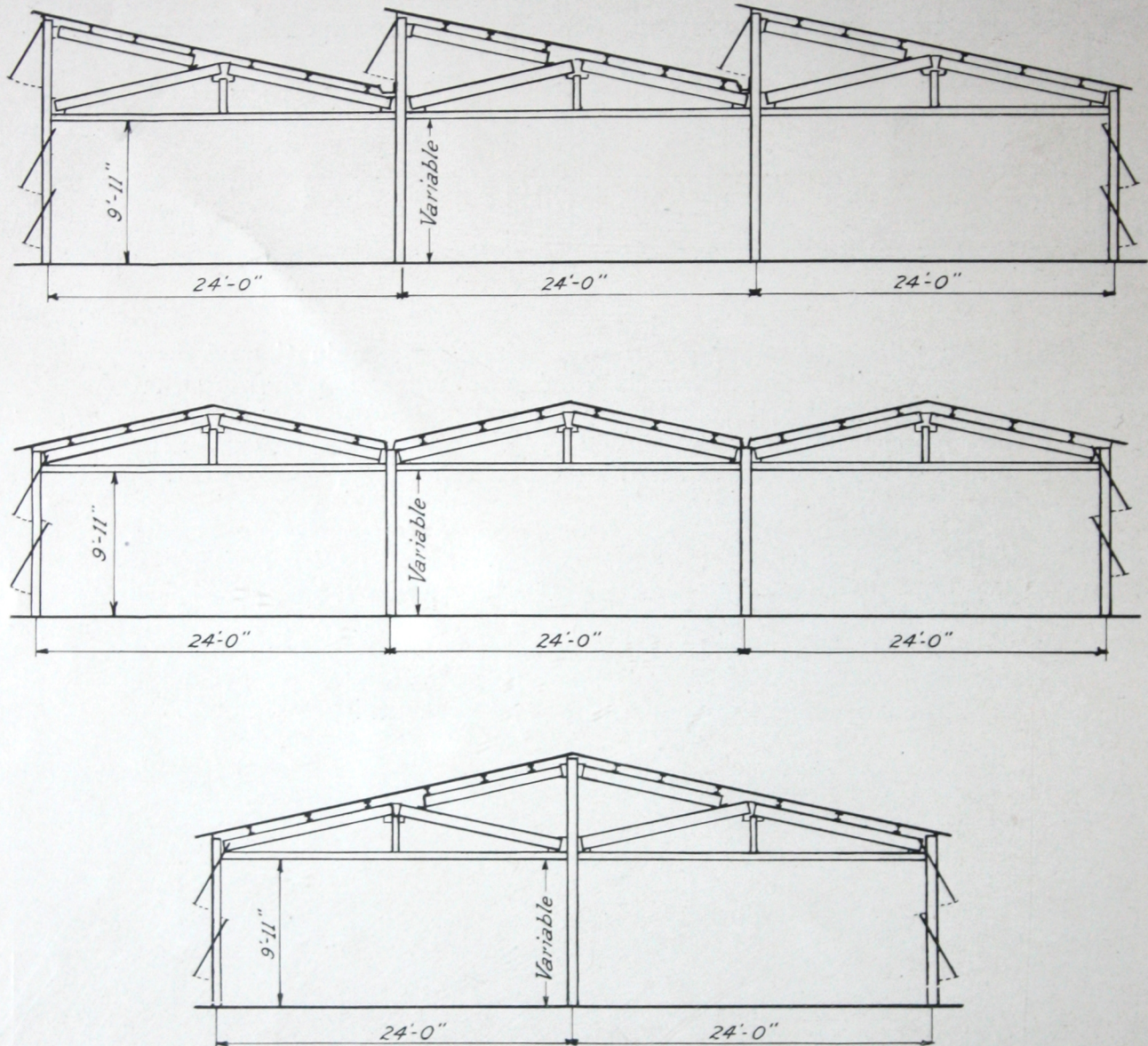


Any shape of building can be obtained by combination of these standard units. The illustrations below are suggestions showing what can be accomplished with these standard materials. The buildings may be rectangular, and "H", "L", "U" or a hollow square. The units are interchangeable, so that the building may be extended in any direction at any time.

For walls any desired arrangement can be secured as regards solid wall space, steel sash windows and metal doors (either single or double). The building is of practically universal adaptability as regards size and arrangement.

We will gladly furnish suggestions for the adaptation of these sawtooth roofs to your requirements; also estimates on providing steel frame work and sash as outlined, or on the finished building.





Adaptations of Pressed Steel Trusses

Because of the standardized unit construction of the sawtooth trusses, illustrated on the preceding pages, the same units can be used to form the hipped trusses and other types illustrated above. We will gladly show how these trusses and adaptations of them will meet your particular requirements.



Truscon Steel Building for the American Can Co. Inner lining of plaster on metal lath for walls and composition board for ceilings.

Inner Lining of Truscon Steel Buildings

Where these buildings are used for living quarters, an inner lining of some kind is often provided to secure insulation against extremes of outside temperature. This lining is installed under the roof and also very frequently on the side walls. The ceiling may be placed either under the top chord of the truss leaving the remainder of the truss exposed, or under the bottom of the truss.

Various materials have been used for this inner lining. The best construction is metal lath plastered, but wood sheathing and even composition boards have been quite frequently used with satisfactory results. A ventilator can be provided in the ridge of the roof to secure circulation of air above the inner lining if desired.



Office Building with wood lining for walls and ceilings.



Inner lining of wood ceiling placed under top chord of truss.

Various Types of Roofs

Another important development in Truscon Steel Buildings to further increase their range of usefulness is the choice of various types of roof construction, in addition to the standard interlocking steel roof plates. Any desired type of roof surfacing can be secured, including asbestos shingles, tile, slate, composition roofing, etc.

In this construction 2 x 4 timbers are nailed directly to the top flange of the steel trusses, and wood sheathing boards are laid across and fastened to the 2 x 4's. A solid flat wood roof is thus secured, to which can be applied the weathering surface of asbestos shingles, prepared roofing, etc. We strongly recommend a fireproof roofing, such as asbestos shingles, as in this way the fire-resisting qualities of the Truscon Steel Building will be largely retained.

An advantage gained by this type of roof construction is that its additional thickness gives better insulation against heat and cold than does a steel plate roof. On the other hand, the steel roof is quickly dismantled without loss, if the building is to be taken down and re-erected in a new location.

We are in a position to furnish estimates of Truscon Steel Buildings with this type of roof construction, as well as with steel roof plates.

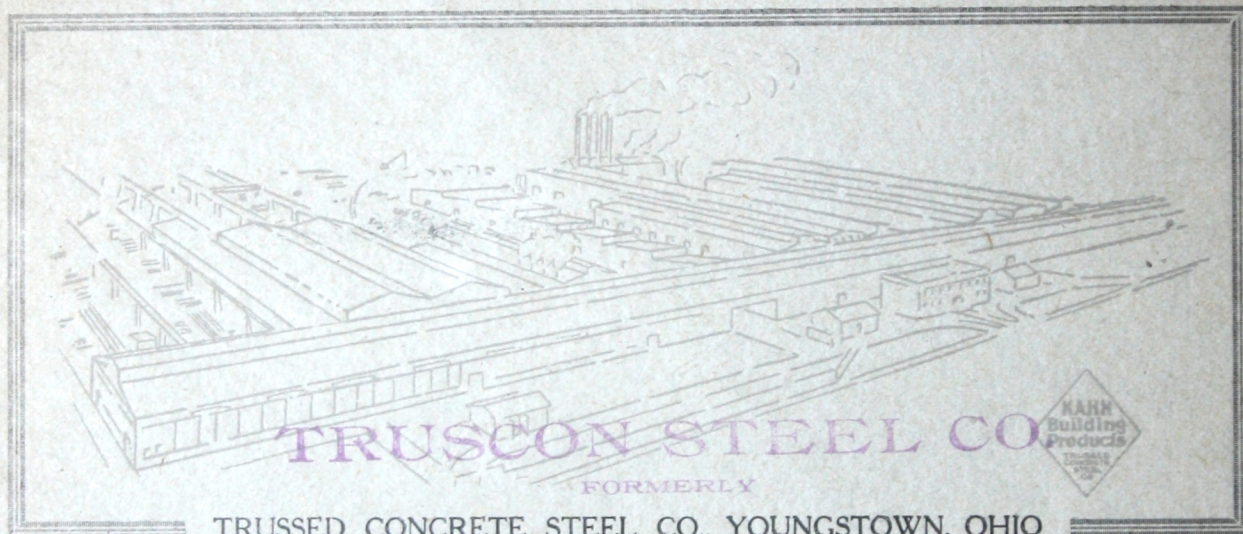


Truscon Steel Warehouse with Asbestos Tile Roof

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TRUSCON STEEL CO.

FORMERLY

TRUSSED CONCRETE STEEL CO., YOUNGSTOWN, OHIO



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